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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,147	04/15/2004	Akio Takahashi	09792909-5845	7825
26263 7590 09/27/2007 SONNENSCHN NATH & ROSENTHAL LLP P.O. BOX 061080 WACKER DRIVE STATION, SEARS TOWER CHICAGO, IL 60606-1080			EXAMINER DOVE, TRACY MAE	
			ART UNIT 1745	PAPER NUMBER 1
			MAIL DATE 09/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/825,147

Applicant(s)

TAKAHASHI ET AL.

Examiner

Tracy Dove

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6 and 8-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 8-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

This Office Action is in response to the communication filed on 7/17/07. Applicant's arguments have been considered, but are not persuasive. Claims 1, 3-6 and 8-15 are pending.

This Action is FINAL, as necessitated by amendment.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 10-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 10 recites "wherein cumulative pore volume in connection with pore sizes of not larger than 0.5  $\mu\text{m}$  in mixed particles of said  $\beta$ -nickel oxy-hydroxide particles and said conductive material is in the range of 10 to 60  $\mu\text{l/g}$ ", which is not supported by the present specification. The specification does not support the cumulative pore volume values for mixed particles of  $\beta$ -nickel oxy-hydroxide particles and conductive material.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al., US 6,686,091.

Yamamoto teaches a nickel-zinc battery comprising a positive electrode containing  $\beta$ -nickel oxyhydroxide and a negative electrode containing zinc. The  $\beta$ -nickel oxyhydroxide has spherical particles and a mean particle size in the range of 19-40  $\mu\text{m}$ . The battery has an alkaline electrolyte and a separator between the positive electrode and the negative electrode. The battery comprises a sealed cylindrical can (3:60-4:41). The  $\beta$ -nickel oxyhydroxide is produced by a chemical oxidation method (5:35-67; 9:20-38). Regarding claim 3, not larger than 0.5% by weight includes the value zero.

Yamamoto does not explicitly state the cumulative pore volume in connection with the pore sizes of the  $\beta$ -nickel oxyhydroxide.

However, the invention would have been obvious to one having ordinary skill in the art at the time the invention was made because the courts have held that where the only difference between the prior art and the claimed invention was a recitation of relative dimensions (pore size) of the claimed material ( $\beta$ -nickel oxyhydroxide) and a material having the claimed relative dimensions would not perform differently than the prior art material ( $\beta$ -nickel oxyhydroxide), the claimed material was not patentably distinct from the prior art material. See MPEP 2144.04. Furthermore, since the prior art  $\beta$ -nickel oxyhydroxide and the claimed  $\beta$ -nickel oxyhydroxide are both produced by chemical oxidation, one of skill would have known the two  $\beta$ -nickel oxyhydroxide materials would have had similar characteristics.

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Claims 1, 3-6 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christian et al., US 6,991,875.

Christian teaches an alkaline battery including a nickel oxyhydroxide cathode and a zinc anode (abstract). The nickel oxyhydroxide particles can have an average particle size ranging from 5-30 mm and may be  $\beta$ -nickel oxyhydroxide (8:30-33). The particles may be spherical in shape and may be produced by chemical oxidation of nickel hydroxide (8:12-26). Regarding claim 3, not larger than 0.5% by weight includes the value zero. The battery comprises a sealed cylindrical can and a separator (Figure 1). Optionally, the cathode can include an oxidative additive, a binder or both. The cathode may also include a mixture of two active cathode materials such as nickel oxyhydroxide and manganese dioxide. The binder may be a fluorocarbon resin such as polytetrafluoroethylene in an amount of between 0.1-2 wt% of the cathode. The cathode includes the active material and conductive carbon particles (7:1-40).

Christian does not explicitly state the cumulative pore volume in connection with the pore sizes of the  $\beta$ -nickel oxyhydroxide.

However, the invention would have been obvious to one having ordinary skill in the art at the time the invention was made because the courts have held that where the only difference between the prior art and the claimed invention was a recitation of relative dimensions (pore size) of the claimed material ( $\beta$ -nickel oxyhydroxide) and a material having the claimed relative dimensions would not perform differently than the prior art material ( $\beta$ -nickel oxyhydroxide), the claimed material was not patentably distinct from the prior art material. See MPEP 2144.04. Furthermore, since the prior art  $\beta$ -nickel oxyhydroxide and the claimed  $\beta$ -nickel oxyhydroxide

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are both produced by chemical oxidation, one of skill would have known the two  $\beta$ -nickel oxyhydroxide materials would have had similar characteristics.

Christian does not explicitly state the mean particle size of the manganese dioxide.

However, the invention would have been obvious to one having ordinary skill in the art at the time the invention was made because the courts have held that where the only difference between the prior art and the claimed invention was a recitation of relative dimensions (particle size) of the claimed material (manganese dioxide) and a material having the claimed relative dimensions would not perform differently than the prior art material (manganese dioxide), the claimed material was not patentably distinct from the prior art material. See MPEP 2144.04. Furthermore, one of skill would have reasonably concluded that the manganese dioxide cathode material of Christian would have had a similar particle size to that of the nickel oxyhydroxide cathode material of Christian.

### ***Response to Arguments***

Applicant's arguments filed 7/17/07 have been fully considered but they are not persuasive.

Applicant asserts unexpected results between the claimed invention and the prior art of record. However, evidence of unexpected results must distinguish the claimed invention over the prior art of record. Applicant does not properly compare the claimed invention and the prior art of record (Christian and/or Yamamoto). Applicant has not shown any evidence that the claimed alkaline battery performs differently than the alkaline battery of Christian and/or the alkaline battery of Yamamoto. Furthermore, Christian teaches a method of improving discharge performance after high temperature storage of an alkaline battery includes providing a positive

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electrode including an active cathode material including nickel oxyhydroxide (1:66-2:6). In addition, Yamamoto teaches the object of the invention is to provide a nickel-zinc battery having a discharge voltage higher than that of a conventional alkaline battery and distinguished in the large-current discharge characteristic (2:28-31).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is 571-272-1285. The examiner can normally be reached on Monday-Thursday (9:00-7:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 24, 2007



TRACY DOVE  
PRIMARY EXAMINER